

DISCLOSURE FILE

Exhibit 3

Docket No.: P9621.00

Attorney: GWM

Division: LB016

Title: LIFE STYLE FEEDBACK SYSTEM

Inventors: Fabian, Willa
Moore, David
Kaufman, Hal
Thompson, David L.

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Substatus: REV Approved to File Next Review: 28AU2000


Related ID:

Outside Counsel:

Licensee: License File No.:

Other Information:

Minutes:

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INVENTION DISCLOSURE FORM

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This is a Word field form. Press enter or tab to move to each field. Please fill out this form as completely as possible. If the allotted space is not sufficient, use a separate sheet. Have your manager sign the form and forward it to the Patent Section of the Law Department. Please attach any drawings and technical descriptions that are available and assemble copies of the background articles, books, advertisements, etc. for use by your patent attorney. For a copy of this form on diskette or for information on network retrieval of this form, please call Systems Support at x4111.

1.

Inventor(s) Full Name(s)	Mail Stop	Home Address (Include Zip Code)
<u>Wille M Fabian</u>	<u>T144</u>	<u>[REDACTED]</u>
<u>David Moore</u>	<u>T144</u>	<u>[REDACTED]</u>
<u>Hal Kaufman</u>	<u>T144</u>	<u>[REDACTED]</u>
<u>David L Thomson</u>	<u>T284</u>	<u>[REDACTED]</u>
2. Title of invention: Life Style Feedback System
3. How have others addressed this problem (List and attach any patents, books, articles, devices, Medtronic or competitor's products, or other background materials you used or which may be prior art)? See attached
4. The invention is described on pages N/A of Lab Notebook No. N/A (Please attach copy).
5. When was a device built which included the invention? N/A
Who built it? N/A Where is it? N/A
Who has supporting documents? N/A
Who witnessed tests? N/A When and where? N/A
6. Discuss the problems which the invention is designed to solve, referring to any prior devices of a similar nature with which you may be familiar. See attached
7. State the advantages of the invention over presently known devices, systems or processes. See attached
8. List all known and other possible uses for the invention. See attached
9. Specifically describe the invention and its operation. You may use and attach copies of sketches, prints, photographs and illustrations which should be signed, witnessed and dated. Use numbers and descriptive names in descriptions and drawings. See attached
10. List all features of the invention that are believed to be novel. See attached
11. Sale or Publication (Needed to establish the date of any printed publication, public use or sale, since no U. S. patent application may be filed after one year from such date.)
 - a. If a device has been offered, or will be offered for sale, or used for profit or otherwise publicly disclosed, state when and to whom delivered and how used? Not disclosed or offered for sale

b. Has a printed description of this invention been made available to persons outside the company? How and when and was use restricted (e.g. licensing agreement, non-disclosure agreement, proprietary legends, etc.)? N/A

12. Inventor(s) Signature(s) (REQUIRED):

Signature

[Signature]
[Signature]
[Signature]

Date

Manager's Comments

13. How is this invention important to your products, plans or goals?

This invention is very much in line with the Medtronic vision of putting the patient in control/center of his/her health care.

14. Manager's Signature (REQUIRED)

Signature

[Signature]

Date

Manager's Printed Name Jack Keimel

Business Unit CRM

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Manager: Please forward to Patent Section of Law Department, MS 301, upon completion of your review.

Life Style Feedback System

Lifestyle and environmental factors is a major impactor on disease progression, remission, and even onset – see the following references (copies attached):

"Lifestyle, not genes, blamed for most cancers", Minneapolis Star & Tribune, July 13, 2000, Pg A1.

"Primary Prevention of Coronary Heart Disease in Women through Diet and Lifestyle", Stamper, et al, New England Journal of Medicine, Vol 343, No 1, July 6, 2000, Pg 16-22.

"Environmental and Heritable Factors in the Causation of Cancer – Analyses of Cohorts of Twins from Sweden, Denmark, and Finland", Lichtenstein, et al, New England Journal of Medicine, Vol 343, No 2, July 13, 2000, Pg 78-85.

"Coronary Heart Disease in Women – An Ounce of Prevention", Nabel, New England Journal of Medicine, Vol 343, No 8, August 24, 2000, Pg 572-4.

By impacting environmental factors, diet, exercise level, medicant intake, etc., a substantial positive impact may be made on the onset, progression and quality of life of many types of patients that have a Medtronic implantable device (ie, PCD, pacemaker, neuro stimulator, drug pump, ILR, Chronicle monitor, etc.). Additionally, non-Medtronic patients may also greatly benefit from this system – this system being used as a preventative tool for those susceptible to diseases (through heredity, work environment, etc.).

This disclosure proposes to allow the capture of non-technical, health-related information through various computerized means (Web-based Calendar software, hand-held personal digital assistants (such as the Palm Pilot, Visor, cellular phones WAP (ie, Nokia)), access to the Web-site hosting their device information) to be displayed in conjunction with or overlaid upon the device information (see attachment for exemplary software for fitness input). The health related information would include exercise data (type, duration, date, time), sleep schedule, special events (celebratory events, stressful events – weddings, babies, birthdays, parties, etc.) and diet information. Food data could be automatically linked to calorie, vitamin and mineral data per a physician recommended diet. Physical activity levels could be linked with additional device information such as EKG, BPM, and blood pressure from interrogation of the implanted device. Trends of lifestyle data could be analyzed through a graphically displayed calendar view combined with device information allowing the patient and their physician a biofeedback loop to indicate what events in the patients life trigger physiological responses (nausea, dizziness, rapid heart rate, high BP, weight gain or loss, etc.). Positive events and negative events could be monitored for impact and possible lifestyle changes. Capture of exact mental and physical environments at the time of device triggered events could be stored so that the physician would have complete information to determine lifestyle influences on device activated responses (see Figure 1 as a representative example).

This disclosure specifically proposes to use the concept of automatic Internet ordering of food via RF UPC labels (in conjunction with Internet based appliances) to provide visual and or verbal feedback to a patient action (i.e., taking drink/food item from refrigerator/pantry, etc), a patient's environment (i.e., temperature, pollen count, humidity, air pollution index, sun (uv index [Lupus]) etc), a patient's activity level (from interrogation of implanted device (i.e., long term activity, short term activity, time of day, etc)), and the patient's physician treatment plan (i.e., weight loss/maintenance, type of food (i.e., low sodium diet), liquid intake, time of day, medicants, etc). The RF UPC code allows the amount of food, the type of food, and the constituents of food (i.e., sodium, calories, vitamin C, fat content, calcium, iron, etc.) to be monitored and positive/negative feedback and/or consoling provided.

This proposal will allow cardiac arrhythmia, heart failure, cancer, lupus, hypertension, and the like patients to alter their lifestyle in a continuous, supportive manner. This concept would also allow proactive, preventative lifestyle changes to high-risk patients to potentially prevent, reduce and/or delay major medical problems.

Prior Art

No substantial prior art was found in a search.

Inventors

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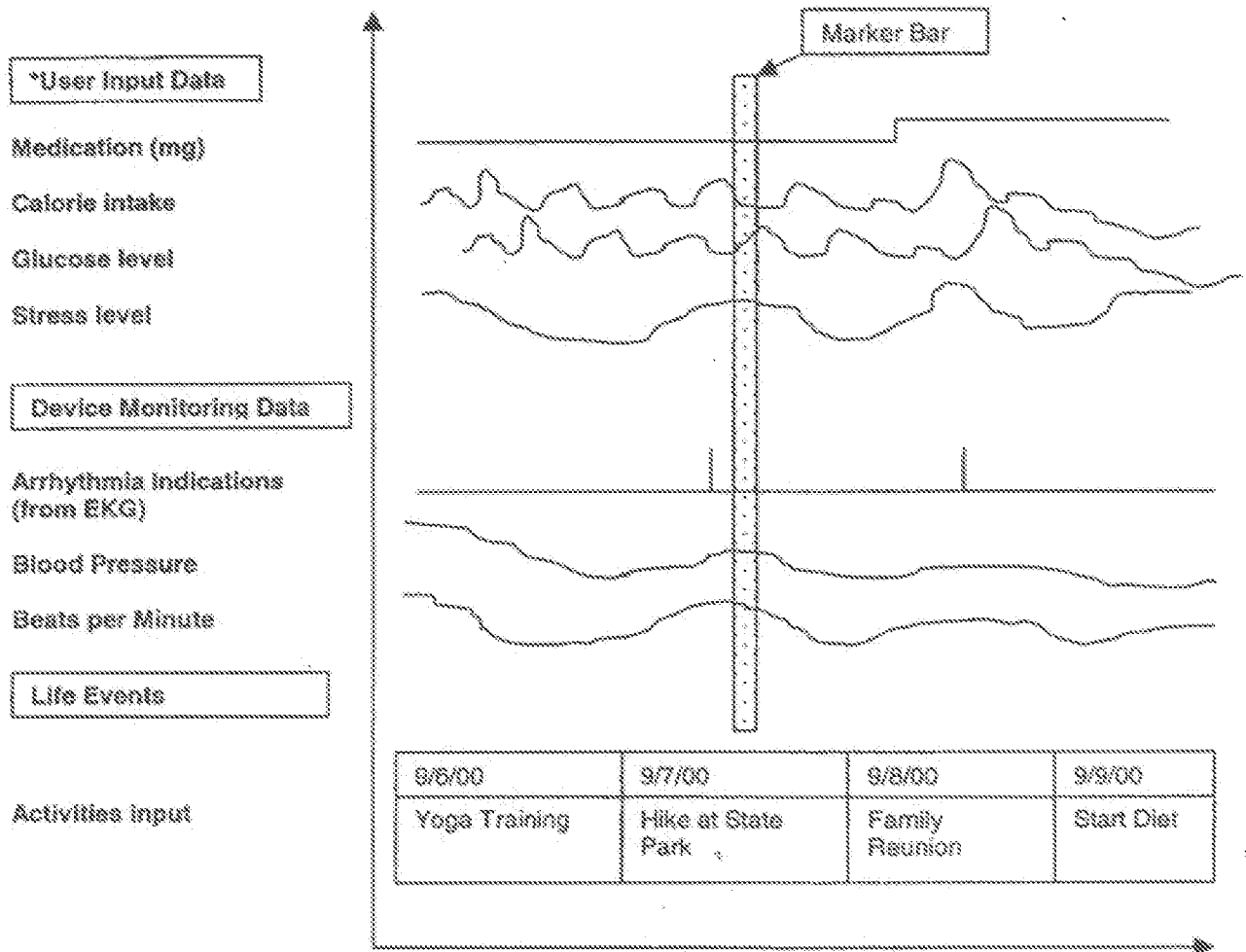
Hal Kaufman

[REDACTED]

David L Thompson

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Life Style Feedback Trend Chart Example



The use of the "Marker" bar on the Display can make it easy to see correlations. The Display should have a feature to see daily, weekly, monthly, and yearly trends.

*Other possible inputs:

Vision acuity
Hearing acuity
Mental alertness
"Good day or bad day"
Cholesterol level
Body Fat %
Body Mass Index
Tobacco Use
Nausea

Alcohol use
Illnesses
Injuries
Surgeries
Physical environment (pollen count, etc.)
Weight
Condition of feet (early circulatory indicator)
Shortness of Breath
Chest pain

ATTACHMENT 1

Example of PDA Exercise Tracking Program

The KeepFit v.2.0 software program available on www.palmix.itil.com is one example of how a user could enter information about their exercise. QUOTE: "KeepFit helps the user in staying fit and in shape, by maintaining and analyzing his workout data. Special features like an online exercise Trainer, Perfect Shape, Body Composition etc. are also provided in the application." ENDQUOTE

The program uses drop down menus to track exercise sessions. An example screen for a new user profile is shown below.

Height	5 ft. 5 in.
Weight	100.0 lbs
Workout Selection	
Skating	
Stair Climbing	
Walking	
Swimming	
Running	
Cycling	
Jogging	
Distance Selection	
Miles	
Km	